

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

|                          |   |                            |
|--------------------------|---|----------------------------|
| EVOLVED WIRELESS, LLC,   | ) |                            |
|                          | ) |                            |
| Plaintiff,               | ) |                            |
|                          | ) |                            |
| v.                       | ) |                            |
|                          | ) | C.A. No. 15-cv-543-JFB-SRF |
| HTC CORPORATION, and HTC | ) |                            |
| AMERICA, INC.,           | ) |                            |
|                          | ) |                            |
| Defendants.              | ) |                            |

**Evolved Wireless's Opening Summary Judgment Brief on Validity**

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Dated: October 6, 2017

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## **I. Introduction**

Evolved Wireless moves for summary judgment that the asserted claims of the '373 patent are valid over HTC's counterclaims of anticipation and obviousness. The asserted patents are presumed valid under 35 U.S.C. § 282. Notwithstanding this presumption, HTC alleges that the '373 patent is anticipated under 35 U.S.C. § 102 by Wang. HTC also alleges that the '373 patent is obvious under 35 U.S.C. § 103 by combination of Hu and Wang, as well as Hu and NEC. But HTC cannot meet, nor has it met, its burden to show invalidity by clear and convincing evidence. Accordingly, Evolved Wireless's motion should be granted.

First, HTC's obviousness and anticipation defenses fail as HTC improperly relies on Wang as prior art. Contrary to HTC's position, Wang is not prior art to the '373 patent as the '373 patent's priority date predates even the earliest priority date for Wang. Moreover, the portions of Wang relied upon by HTC for anticipation and obviousness are not entitled to the provisional date for priority because Wang added this new and substantial matter after the filing date of the '373 patent.

Further, HTC's obviousness combinations fail because HTC has not offered any evidence—other than Dr. Kakaes' conclusory statements—that one of skill in the art would be motivated to combine the references. Dr. Kakaes only states that a skilled artisan *could* combine specific elements from the multiple references. The law requires more. Dr. Kakaes must show that a skilled artisan *would* combine the elements. Under Federal Circuit precedent, these conclusory allegations do not raise any genuine issue of material fact that the asserted claims are invalid by clear and convincing evidence.

## **II. Nature and Stage of the Proceedings**

On June 25, 2015, Evolved Wireless filed this patent infringement lawsuit against HTC

Corporation and HTC America Inc. (collectively, “HTC”), alleging infringement of five standard-essential patents relating to LTE, or 4G, wireless communication systems.<sup>1</sup> D.I. 1. The Court construed the disputed terms of the patents on November 14, 2016. D.I. 116. On July 21, 2017, the Court dismissed the ’916, ’965, and ’481 patents from the case per the parties’ stipulation, and the two remaining patents are the ’373 and ’236 patents. *See* D.I. 178. Fact discovery closed on April 10, 2017 and expert discovery concluded on August 23, 2017. *See* D.I. 150 & 159. Evolved Wireless now seeks partial summary judgment that the ’373 patent is not invalid. *See* D.I. 225.<sup>2</sup> The pretrial conference is set for March 27, 2018 and trial begins on April 23, 2018.

### **III. Summary of Argument**

1. Wang is not prior art to the ’373 patent. First, the asserted claims of the ’373 patent are entitled to the priority date of its provisional application, which predates any of Wang’s disclosures. Second, regardless of the ’373 patent’s provisional application, Wang’s provisional application does not support its non-provisional application and Wang is only entitled to its non-provisional filing date—after the filing of the ’373 patent. As such, HTC’s obviousness and anticipation arguments based on Wang fail because Wang is not prior art.

2. Wang does not anticipate any asserted claims. Wang does not explicitly disclose that the target base station determines the dedicated preamble as required by each independent claim. Further, Wang does not inherently disclose the target base station determining the dedicated preamble because record evidence shows that the source base station could also determine the dedicated preamble. Because Wang does not explicitly or inherently disclose each limitation of

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<sup>1</sup> The patents are U.S. Patent Nos. 7,746,916, 7,768,965, 7,809,373, 7,881,236, and 8,218,481.

<sup>2</sup> Because HTC, Samsung, Microsoft, HTC, ZTE, and Motorola all used the same expert to opine on invalidity, Dr. Kakaes, the summary judgment briefs on validity filed in 15-cv-00543, 15-cv-00544, 15-cv-00545, 15-cv-00546, and 15-cv-00547 include substantially the same arguments.

the independent claims, it does not anticipate the '373 patent.

3. HTC's conclusory statements as evidence of a motivation to combine elements from specific references fail to establish invalidity by clear and convincing evidence. To show any claim of the '373 patent is obvious, HTC is required to show both a specific motivation to combine the references and a reasonable expectation of success in doing so. In this case, HTC's expert, Dr. Kakaes, alleged that the references could be combined, but he failed to offer reasoned analysis regarding why they would be combined prior to the invention date of the '373 patent. Nor does Dr. Kakaes show that such a combination would be successful. Under Federal Circuit case law, HTC's obviousness arguments fail.

#### **IV. Statement of Facts**

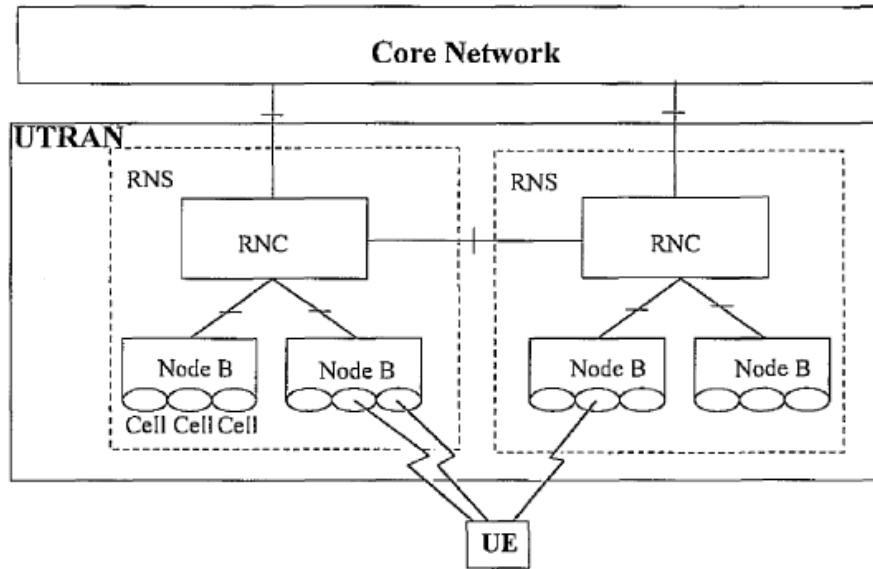
##### **A. Overview of Wireless Telecommunications**

Mobile devices allow users to transmit and receive information such as voice or data wirelessly over a wide geographical area. Wireless communications networks that divide the service area into relatively small geographic cells are referred to as "cellular." Cooklev Op. Rep., Cooklev Decl. Ex. A ¶ 51. A cell is a coverage area that is serviced by a single cell site such as a base station. *Id.* The base stations serve as a fixed point of communication, e.g., a cell tower, for mobile devices to connect with other mobile phones and with outside networks. *Id.* Prior art 3G mobile device networks are made up of, among other things, Radio Network Controllers ("RNCs"), base stations ("Node Bs") and mobile devices, referred to as User Equipment ("UE"). See '373 patent, Ex. 1<sup>3</sup> at Fig. 1. The prior art network, as depicted in Figure 1 of the '373 patent, is below.

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<sup>3</sup> Besides Dr. Cooklev's reports, exhibits are attached to the declaration of Ryan M. Schultz.

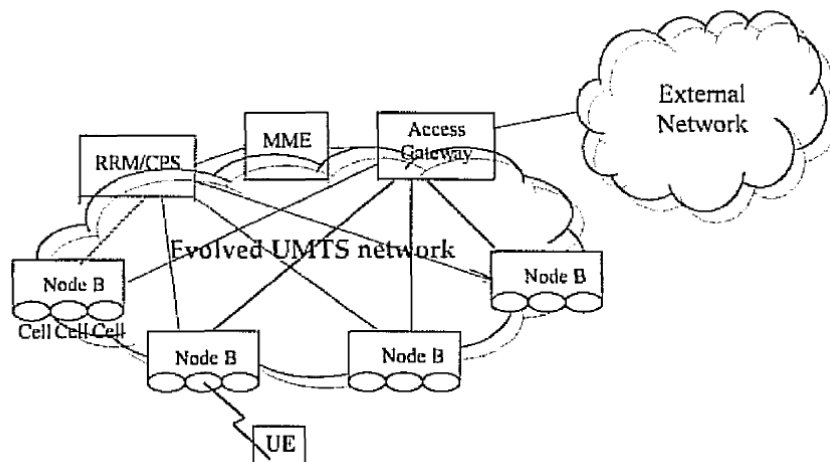




In LTE systems, a mobile device (UE in the figure above) uses a random access channel (“RACH”) to establish communications with a base station. Cooklev Op. Rep., Ex. A ¶¶ 92-95. For example, when a mobile device is powered on, the device uses a random access procedure to access the base station. *Id.* ¶ 93. To begin the random access procedure, the mobile device transmits a randomly selected RACH preamble. *Id.* ¶ 95. When a mobile device with an ongoing call or data session moves away from the coverage area of one base station (e.g., the “source base station”) and towards the coverage area of the second base station (e.g., the “target base station”), it is necessary to *handover* the mobile device’s radio connection to avoid an interruption or total loss of service. *Id.* Mobile devices also use the RACH in a handover procedure. *Id.* ¶ 104. Handovers are fundamental to a wireless system because without a handover, the mobile device would lack its very purpose—mobility. Indeed, during development of the LTE standard, the Third Generation Partnership Project (“3GPP”)—the group responsible for developing the LTE standard—identified mobility as one of the major technical improvements in LTE as compared to 3G. *Id.* ¶ 116; *see, e.g., id.* ¶¶ 60-67.

## B. The '373 Patent

The '373 patent is titled “Method of Transmitting and Receiving Radio Access Information in a Wireless Mobile Communications System” and issued on October 5, 2010. *See* Ex. 1. The '373 patent was filed on October 27, 2006 and claims priority to a provisional application filed on October 31, 2005. *Id.* The inventions claimed in the '373 patent are directed to a much improved handover of a mobile device from one base station to another. *Id.* at 1:18-24. The inventions of the '373 patent achieve this novel handover process in two key respects. First, in contrast to prior art systems described above, the inventions reduce hardware complexity by eliminating the need for RNCs by having the relevant functionality related to handovers in the “evolved” or “enhanced” base stations (“eNB” for short). *Id.* at 3:37-53. Thus, instead of locating the Radio Resource Control (“RRC”) layer in the RNC, the evolved base station “performs the function of controlling radio resources between the mobile terminal and the network.” *Compare id.* at 2:28-39 (discussing RRC messages with the RNC) *with id.* at 3:60-67 (describing that the “functions of the RRC layer may be distributed among and performed within the Node B”). An example of this network is depicted in Figure 6, shown below.



Therefore, unlike the prior art, which relied on RNCs to determine handover and mobility

functions, the inventions claimed in the '373 Patent utilize the source base station to make the handover decision. *See id.* at 6:19-23. This beneficially reduces delays and service disruption during the handover process. *Id.* at 5:11-17; 5:58-63; Fig. 6; *see also* Cooklev Op. Rep., Ex. A ¶¶ 144-151. It also reduces network complexity and costs to deploy telecommunications networks, like LTE networks. Cooklev Op. Rep., Ex. A ¶¶ 144-151.

Another advantage over prior art systems is the use of a “dedicated preamble.” During the random access procedure, the base station uses the received RACH preamble to determine the specific mobile device that transmitted the received data. '373 patent, Ex. 1 at 6:45-49. In prior art systems, the mobile device randomly selects the RACH preamble from a finite number of available RACH preambles. *Id.* at 6:45-46. Because the number of RACH preambles is finite, it is possible for more than one mobile device to select the same preamble for transmission. When this occurs, the RACH message is unfortunately susceptible to a “collision”—a situation when two mobile devices may transmit the same RACH preamble to the base station at the same time. In this circumstance, the base station cannot determine which device sent the RACH preamble and the handover is disrupted. *Id.* at 6:38-49 (“However, in some cases, one or more UEs could select a same signature because there are a limited number of signatures. Therefore, if two or more UEs transmit the preamble of the same signature to the eNB at the same time, the eNB cannot possibly determine which UE transmitted such preamble.”). Preamble collision causes delays during the handover process and can ultimately lead to interruption or total loss of service. *Id.* at 5:51-57 (“[B]ecause of a possibility for a RACH collision (i.e. the same signature is being selected from multiple terminals that use of the RACH), the processing time for the handover process may be delayed.”).

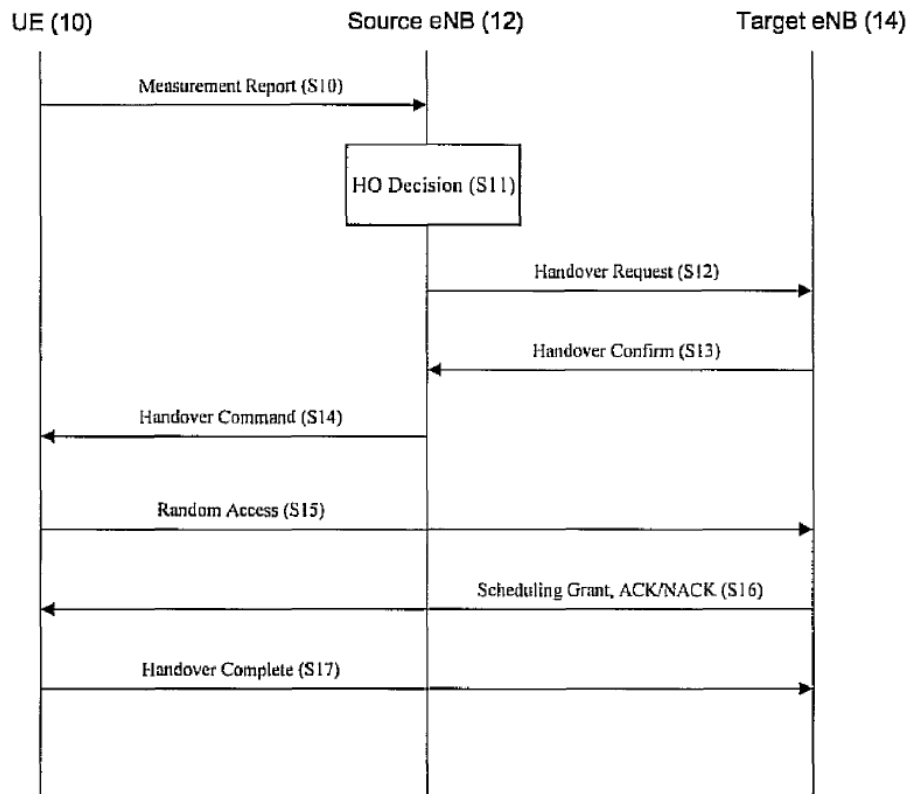
To overcome problems associated with the prior art, the inventions of the '373 patent

employ dedicated preambles in the handover process. The dedicated preamble is predetermined prior to the handover procedure, i.e. it is assigned by the target base station for use by a specific mobile device. “In contrast [to the prior art], the features of the present invention provide that the terminal receives necessary information from a source cell in advance (i.e., before the terminal transmits a RACH setup request to a network) in order to utilize the RACH in a later step. As a result, the terminal can connect with the target cell with minimal delays.” ’373 patent, Ex. 1 at 5:58-63; *see also id.* at 6:49-60; Fig. 9 (“To avoid [collision] from happening, the UE should not transmit a preamble that is selected from the signatures used in the RACH during the handover; but rather, the UE may transmit a preamble of a previously defined signature through the handover confirm message from the target eNB.”). In this regard, the ’373 patent “allows a terminal to access a target base station (i.e., target eNB) in a faster and more efficient manner.” *Id.* at 1:21-24. The dedicated preamble reduces interruption time during a handover and “the risk of a failed handover where [the] UE collides with another UE and is left with no connection to either source or target eNB.” Cooklev Op. Rep., Ex. A ¶ 152.

### **C. The Asserted Claims**

The ’373 patent has three independent method claims. Claim 1 recites a method performed by a source base station, claim 8 recites a method performed by a target base station, and claim 15 recites a method performed by a mobile device. Additionally, claims 24 and 25 are apparatus claims directed at “mobile terminals,” or mobile devices, capable of performing the recited handovers. Evolved Wireless asserted claims 15 through 21 and 23 through 25 of the ’373 patent (the mobile device claims) against HTC. Final Infringement Contentions, Ex. 2. Figure 9 of the ’373 Patent, shown below, discloses sequentially from top to bottom how the claimed handover occurs.

Fig 9



As shown above, the source base station “Source eNB (12)” receives a measurement report from the mobile device “UE (10),” uses the report to make the “HO Decision (S11),” and sends a “Handover Request (S12)” to the target base station “Target eNB (14).” ’373 patent, Ex. 1 at 6:9-29. The target base station “Target eNB (14)” sends a “Handover Confirm (S13)” (which includes the signature related information, i.e. “dedicated preamble”) to the source base station “Source eNB (12).” *Id.* at 6:50-54 (describing the mobile device using a “preamble of a previously defined signature through the handover confirm message from the target eNB”). The dedicated preamble is then sent to the mobile device “UE (10)” in the “Handover Command (S14).” *Id.* at 7:4-7. The mobile device uses the signature information, i.e. the “dedicated

preamble,” to then access the target base station directly, as evidenced by the “Random Access (S15).” *Id.* at 7:8-11.

On November 14, 2016, the Court construed three disputed terms of the ’373 patent, “handover” and “target base station” recited in all independent claims, and “wherein the measurement report is used to determine” recited in claim 17. D.I. 116. Specifically, the Court construed “handover” as “transfer of a terminal's connection with a source base station to a target base station,” “target base station” as “the source base station determines that the mobile terminal will be transferred to the target base station,” and “the measurement report is used to determine” as “the measurement report is used by the source base station to determine.” *Id.*

#### **D. HTC’s Invalidity Arguments**

In his opening expert report, Dr. Kakaes contends that the ’373 patent is invalid based on anticipation and obviousness with respect to U.S. Patent No. 8,131,295 (“Wang”), and is obvious based on Chinese Patent No. CN1596020A (“Hu”), the combination of Hu and Wang, and the combination of Hu and 3GPP document no. R3-051106 submitted by NEC and NTT DoCoMo (“NEC”). Kakaes Op. Rep., Ex. 3.

### **V. Argument**

#### **A. Legal Principles**

Summary judgment is appropriate when “there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(c). In patent cases, Federal Circuit precedent governs substantive patent law issues, while the law of the regional circuit governs procedural issues. *Aero Prods. Int’l, Inc. v. Intex Recreation Corp.*, 466 F.3d 1000, 1016 (Fed. Cir. 2006). Upon a party’s motion for summary judgment, all facts are to be viewed in the light most favorable to the non-moving party. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986). “The inquiry performed is the threshold inquiry of determining

whether there is the need for a trial—whether, in other words, there are any genuine factual issues that properly can be resolved only by a finder of fact because they may reasonably be resolved in favor of either party.” *Id.* at 250.

A nonmoving party asserting that a material fact is in dispute must support this assertion by (A) “citing to particular parts of materials in the record, including depositions, documents, electronically stored information, affidavits or declarations, stipulations, . . . admissions, interrogatory answers, or other materials;” or (B) “showing that the materials cited [by the opposing party] do not establish the absence . . . of a genuine dispute.” Fed. R. Civ. P. 56(c)(1). Summary judgment “is the ‘put up or shut up’ moment in a lawsuit, when a party must show what evidence it has that would convince a trier of fact to accept its version of events.” *Tyco Healthcare Grp., LP v. C.R. Bard, Inc.*, 818 F. Supp. 2d 777, 787 (D. Del. 2011) (citing *Koszola v. Bd. of Educ. of Chicago*, 385 F.3d 1104, 1111 (7th Cir. 2004)). “[T]he non-moving party must rebut the motion with facts in the record and cannot rest solely on assertions made in the pleadings, legal memoranda, or oral argument.” *Berkeley Inv. Grp., Ltd. v. Colkitt*, 455 F.3d 195, 201 (3d Cir. 2006). As set forth below, HTC has failed to raise a genuine issue of material fact of invalidity related to the ’373 patent and Evolved Wireless’s motion should be granted.

#### **B. Level of Ordinary Skill**

HTC, through Dr. Kakaes, alleges that a person of ordinary skill with respect to the ’373 patent “would have had a master’s degree in electrical engineering or a related discipline with 2-3 years of experience in cellular communication systems, and would have been aware of the efforts of the Third Generation Partnership Project (3GPP) and its various working groups.” Kakaes Op. Rep., Ex. 3 ¶ 32. Alternatively, a person of ordinary skill “would have had a Ph.D. in electrical engineering or a related discipline with the same familiarity with the work of the Third Generation Partnership Project and its various groups.” *Id.* Evolved Wireless contends through

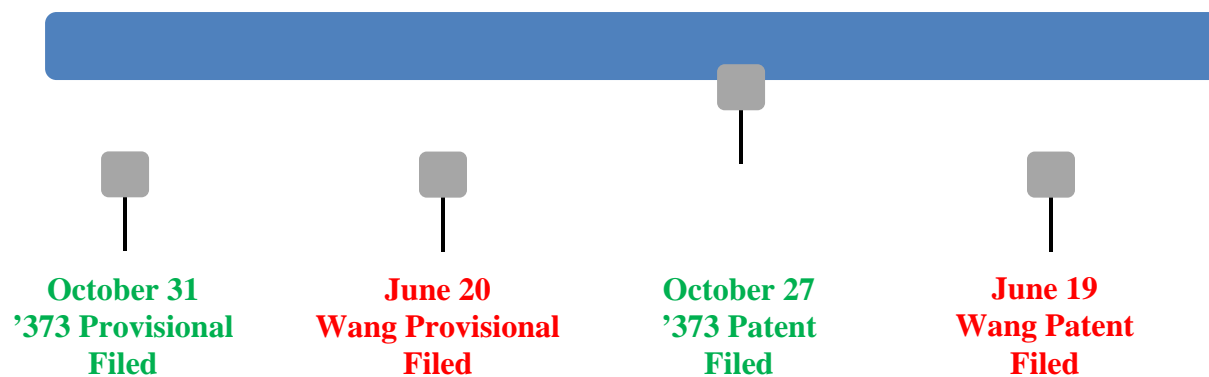
Dr. Cooklev that a person of ordinary skill “would have had a bachelor’s degree in electrical engineering with 2-3 years of experience in cellular communication systems” or alternatively “a master’s degree in electrical engineering” and “would have been aware of the Third Generation Partnership Project (“3GPP”) and its work on the LTE standard.” Cooklev Op. Rep., Ex. A

¶ 221. Both party’s proposed level of skill overlaps and there is no significant difference between the two.

### C. Wang is not Prior Art to the ’373 Patent

Dr. Kakaes’ anticipation and obviousness arguments fail because Wang is not prior art to the ’373 patent—the priority date of the ’373 patent is before any of Wang’s disclosures.

The ’373 patent was filed on October 27, 2006 and claims priority to a provisional application filed on October 31, 2005. *See* Ex.1. Wang was filed on June 19, 2007 and claims priority to a provisional application filed on June 20, 2006. Ex. 4. These dates are shown in the timeline below:



Wang is not prior art to the ’373 patent because the ’373 patent is supported by its provisional application filed on October 31, 2005, which is before Wang’s provisional application filed in June 2006. Further, Wang is not supported by its provisional filed on June 20,



2006, leaving Wang with the priority date of June 19, 2007—after the '373 patent was filed in October 2006. Evolved Wireless requests summary judgment on both of these issues.

### **i. Legal Principles**

“An application for patent . . . for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in a provisional application . . . shall have the same effect, as to such invention, as though filed on the date of the provisional application . . . .” 35 U.S.C. § 119(e)(1) (2006). “In other words, the specification of the *provisional* must ‘contain a written description of the invention and the manner and process of making and using it, in such full, clear, concise, and exact terms,’ 35 U.S.C. § 112 ¶ 1, to enable an ordinarily skilled artisan to practice the invention claimed in the *non-provisional* application.” *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *New Railhead Mfg., LLC v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1294 (Fed. Cir. 2002)) (emphasis in original). Written description is also referred to as a possession test, where the disclosure “must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, [the inventor] was in possession of the invention.” *Revolution Eyewear, Inc. v. Aspect Eyewear, Inc.*, 563 F.3d 1358, 1366 (Fed. Cir. 2009) (citing *Vas-Cath Inc. v. Mahurkar*, 935 F.3d 1555, 1563-64 (Fed. Cir. 1991)). Drawings alone can provide the necessary written description. *Id.*

The written description inquiry is a question of fact. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). “Compliance with the written description requirement . . . is amenable to summary judgment in cases where no reasonable fact finder could return a verdict for the non-moving party.” *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1307 (Fed. Cir. 2008). Here, no reasonable jury could conclude that Wang is prior art to the '373 patent—HTC’s analysis of the '373 provisional is contradictory and unsupported by the evidence. Further, no reasonable jury could find that Wang is supported by its provisional

application—the disclosures relied on by HTC were added only when the non-provisional application was filed. Summary judgment is thus appropriate.

**ii. The '373 Patent is Entitled to its Provisional Application's Filing Date**

Dr. Kakaes alleges that the '373 provisional application does not support eight different limitations claimed in the '373 patent. *See* Kakaes Op. Rep., Ex. 3 ¶ 85 (“In my opinion, the provisional application does not describe the claim features listed below.”). But Dr. Kakaes’ analysis why he believes, as a person of ordinary skill, these claim limitations are not supported is contradictory and not supported by the evidence. As analyzed by Evolved Wireless’s expert, Dr. Cooklev, the limitations Dr. Kakaes identifies as unsupported are explicitly disclosed both in the written description and in drawings from the provisional. Because no reasonable jury could find that the '373 provisional does not support the claims of the '373 patent, Evolved Wireless respectfully moves for partial summary judgment that the asserted claims are entitled to the priority date of the '373 provisional. As such, Wang is not prior art and HTC’s invalidity arguments based on Wang fail as a matter of law.

**(1) “wherein the preamble information is a dedicated preamble used only for a specific terminal” (independent claim 15 and 24)**

The “dedicated preamble” limitation is supported by the '373 provisional. The '373 patent describes the “dedicated preamble” in the context of a mobile device using the random access channel (“RACH”) to access the target base station during a handover. “For example, when the RACH is being used while the UE accesses to the target eNB, the UE may utilize a preamble which is selected from signatures contained in the UE.” '373 patent, Ex. 1 at 6:38-41. “To avoid [a collision] from happening, the UE should not transmit a preamble that is selected from the signatures used in the RACH during the handover; but rather, the UE may transmit a preamble of *a previously defined signature* through the handover confirm message from the

target eNB.” *Id.* at 6:49-54 (emphasis added). Thus, the preamble is previously selected for the mobile device and thus unique to that device. The ’373 provisional supports both the claims and these disclosures.

As analyzed by Dr. Cooklev, the ’373 provisional discusses several types of access procedures, including initial access procedures and handover access procedures. *See* ’373 provisional, Ex. at 17 § 2.2 (“Initial Access for LTE”); *id.* at 8271 § 2.3 (“Cell Change for LTE”); Cooklev Reb. Rep., Ex. B ¶¶ 347-53. In the second and third proposed handover procedure, the ’373 provisional discusses a “resource grant” and “reserve[ing] a resource” for the handover. *Id.* at 8272-73. For example, in the second proposed procedure, the mobile device (“UE”) makes a “resource request” and the mobile device is “assign[ed] the radio resource” from either the “Serving eNode-B or Target e-Node-B” for use with the target base station during a handover. *Id.* at 8272.

**Proposed procedure 2 :**

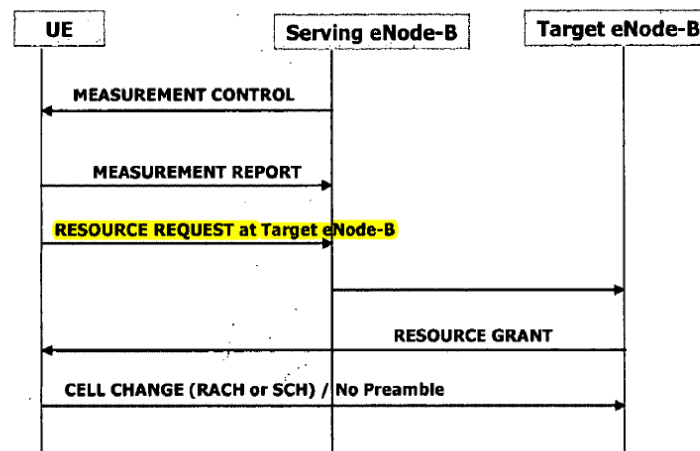


Fig 5. Proposed cell change procedure with SCH

1. if the UE is indicated to perform CELL CHANGE by Serving eNode-B, UE request the resource grant which will be used for indication cell change to target eNode-B on RACH to Serving eNode-B.
2. Serving e-Node-B request to Target e-Node-B for resource grant which will be used by UE
3. UE assign the radio resource in Target e-Node B from Serving eNode-B or Target e-Node-B

The third proposal also discusses reserving resources for the handover, specifically where the target base station “*reserve[s] the resource* for handover UE and broadcast[s] this information on UL MAP.” *Id.* at 8273 (emphasis added).

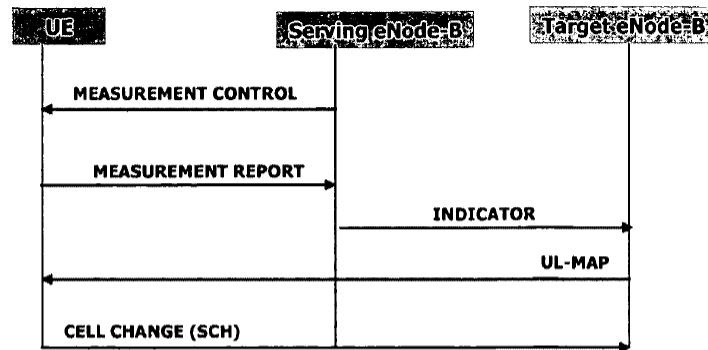


Fig 6. Proposed cell change procedure with UL-MAP

1. Serving eNode-B send some information of UE handover to Target eNode-B
2. Target eNode-B reserve the resource for handover UE and broadcast this information on UL-MAP
3. UE on handover monitor UL-MAP from Target eNode-B
4. UE send CELL CHANGE on SCH when UE needs to indicate to Target eNode-B.

[YD] The proposed procedure 2 or 3 could be patentable. Alternatively, target NB could send UE a RACH preamble resource e.g. signature via source NB.

After proposing that both these handover procedures use some type of resource reservation, the '373 provisional states that “[a]ternatively, target NB could send UE a RACH preamble resource e.g. signature via source NB.” *Id.* This is an explicit disclosure of the claimed “dedicated preamble used only for a specific terminal.” As described by the '373 patent specification, signatures were associated with the preamble and used on the RACH. *See* '373 patent, Ex. 1 at 2:40-3:36 (describing the PRACH of a WCDMA prior art system as “divided into a preamble part and a message part,” where “the terminal first selects one access slot and one (preamble) signature,” with “16 symbol signatures (Si, i=0, . . . 15).”). Thus, a “RACH preamble resource e.g. signature” is one type of resource reservation described by the '373 provisional, and a person of ordinary skill would understand that this RACH resource reservation provides written description support for the claimed “dedicated preamble.” Cooklev Reb. Rep..

Ex. B ¶ 351.

A reserved “RACH preamble resource e.g. signature” also teaches that the resource is used only for a specific terminal. As shown in Figure 6 above from the provisional, the target base station is communicating with one terminal, i.e. UE, during the handover process. Thus, this discloses that the reserved “RACH preamble resource e.g. signature” was reserved only for the UE performing the handover. In this sense, a person of ordinary skill would understand that the reserved resource described by the provisional is reserved for a specific terminal. *Id.* This is further evidenced by discussion of initial access procedures. In a proposed initial access paging procedure, the ’373 provisional describes reserving the RACH preamble by allocating different RACH resources “such as frequency[sic]/symbols for either RACH preamble or message (and also signature for RACH preamble if needed).” ’373 provisional, Ex. 5 at 17. The provisional explains that this initial access procedure may result in “unnecessarily allocate[d] resources” because the resource will be reserved in multiple base stations for the UE, but will only be used in one base station. *Id.* This disclosure is further evidence that the inventors were in possession of the reserved RACH preamble claimed by the ’373 patent as of the date of the provisional application. *See Cooklev Reb. Rep.*, Ex. B ¶ 352.

Dr. Kakaes’ analysis of the ’373 provisional is contradictory and is unsupported by the evidence. For example, Dr. Kakaes alleges that “Proposed procedure 2 is silent on which device determines the contents of the RESOURCE GRANT message,” but he ignores the text underneath the image that states the “UE [is] assign[ed] radio resource in Target e-Node B *from Serving eNode-B or Target e-Node-B.*” *Compare* Kakaes Op. Rep., Ex. 3 ¶ 93, with ’373 provisional, Ex. 5 at 8273 (emphasis added). The ’373 provisional specifically describes the resourced grant coming from either the source or the target base station, and Dr. Kakaes’

opinions ignoring these disclosures cannot support a reasonable jury finding that the '373 provisional does not support the asserted claims. Further, Dr. Kakaes concludes that because the initial access section “focuses on initial access,” its teachings of reserved RACH preamble resources “are not relevant to a ‘source’ eNodeB or ‘target’ eNodeB” during a handover. Kakaes Supp. Rep., Ex. 6 ¶ 14. But both the initial access procedures and handover access procedures described by the '373 provisional use the RACH and are undeniably relevant to what the provisional teaches one of ordinary skill regarding how to use the RACH during a handover procedure.

As another example, Dr. Kakaes concludes that an “eNodeB can also ‘reserve’ a preamble and yet not use it only for one specific terminal.” Kakaes Supp. Rep., Ex. 6 ¶ 9. This conclusion is contradicted by other opinions from Dr. Kakaes and is not supported by the evidence. First, as discussed further above, the '373 provisional discloses reserving initial RACH resources for a particular device so that the resources are unavailable for any other device. *See* '373 provisional, Ex. 5 at EW\_DEFENDANTS0008269. Next, when opining on invalidity, Dr. Kakaes concludes that a “designated” access resource disclosed by Hu and a “reserved” RACH preamble signature disclosed by Wang both meet the claim limitations that the resource is “used only for a specific terminal,” yet when opining on the '373 provisional, Dr. Kakaes concludes that a “reserved” RACH preamble resource is *not* used only for a specific terminal. *Compare* Kakaes Op. Rep., Ex. 3 ¶¶ 159-62 (discussing Hu), *and id.* ¶¶ 326-32 (discussing Wang), *with* Kakaes Supp. Rep., Ex. 6 ¶¶ 5-14 (discussing the '373 provisional). Based on Dr. Kakaes’ unsupported, contradictory, and incomplete analysis of the '373 provisional, no reasonable jury could conclude the asserted claims are not supported by the provisional. Thus, summary judgment for Evolved Wireless is appropriate. *See Lamoureux v. AnazaoHealth Corp.*, No. 03-

cv-01382(WIG), 2012 U.S. Dist. LEXIS 191266, at \*30-31 (D. Conn. Sept. 24, 2012) (finding as a matter of law that the pictures and description of the provisional entitles the patent to the provisional filing date).

**(2) “wherein the access information is for a random access channel (RACH)” (dependent claim 5) // “transmitting the preamble information to the target base station for performing a radio access procedure with the target cell” (dependent claim 18)**

HTC’s allegation that the ’373 provisional does not disclose the limitation “wherein the access information is for a random access channel (RACH)” from dependent claim 5 and “transmitting the preamble information to the target base station for performing a radio access procedure with the target cell” from dependent claim 18 is without merit. *See* Kakaes Op. Rep., Ex. 3 ¶¶ 96, 100-01. Indeed, the ’373 provisional describes using the random access channel to perform a handover. For example, in the first proposed handover procedure discussed under the heading “Cell Change for LTE,” the ’373 provisional describes using the RACH to perform the handover. ’373 provisional, Ex. 5 at 8272.

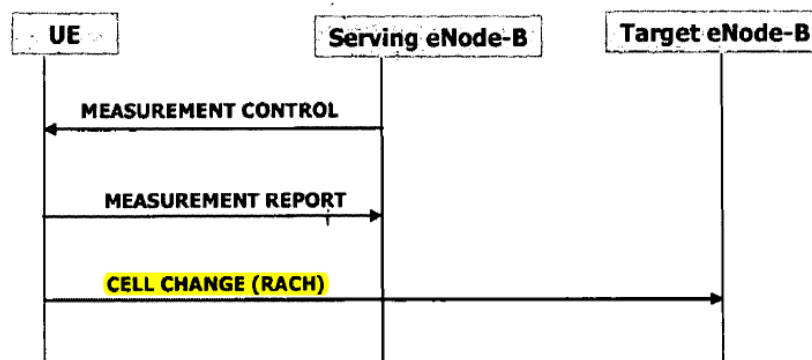


Fig 4. Proposed cell change procedure 1

1. UE communicates with Cell A (Node-B 1)
2. UE report measurement (e.g. intra-frequency measurement)
3. UE perform CELL ACCESS to Cell B (Node-b 2). For the indication fo access to the target cell, UE send the information included cell id and cause value (e.g, cell change) on RACH.

Significantly, the ’373 provisional also describes using a reserved “RACH preamble

resource.” *Id.* at 8273. This undeniably shows that the inventors were in possession of the claim limitation “wherein the access information is for a random access channel (RACH)” —the random access channel (“RACH”) is explicitly disclosed where a RACH handover resource is sent to the mobile device from the target base station through the source base station. *Id.* (“[T]arget NB could send UE a RACH preamble resource e.g. signature via source NB.”); *see also* Cooklev Reb. Rep., Ex. B ¶¶ 370-76. HTC’s argument that “in proposed procedure 3 in the ‘2.3 CELL Change for LTE’ section of the provisional application, the provisional application does not describe using a RACH but instead describes using an SCH, and thus does not describe the claim feature ‘access information is for a random access channel (RACH),’” does not raise any genuine issue of material fact for trial—the provisional explicitly describes using a reserved “RACH preamble resource e.g. signature” during a handover. ’373 provisional, Ex. 5 at 8273.

HTC’s arguments are similarly deficient for claim 18. It is axiomatic from the ’373 provisional that the mobile device will transmit the reserved RACH preamble to the target base station in the handover procedure. As disclosed in both of the two handover procedures using resource reservation, the mobile device performs the handover after receiving the resource. *See* ’373 provisional, Ex. 5 at 8272-73. Thus, when the mobile device receives the reserved RACH resource described by the ’373 provisional, it is clear to a person of ordinary skill that the mobile device will use the resource to perform the handover. *See* Cooklev Reb. Rep., Ex. B ¶ 431 (referring back to ¶¶ 421-24). Indeed, HTC’s arguments for claim 18 appear to be nothing more than a rehash of its argument that the ’373 provisional does not disclose the claimed “dedicated preamble” limitation. Because summary judgment is appropriate with respect to the “dedicated preamble” limitation, summary judgment that claims 5 and 18 are supported by the ’373 provisional is also warranted.



**(3) “wherein the preamble information includes frequency information and time information” (dependent claim 6) // “wherein the access information includes a transmission characteristic of the preamble information, and the transmission characteristic relates to frequency and time used in transmitting the preamble information” (dependent claim 19)**

The limitations of claims 6 and 19 are explicitly disclosed by the '373 provisional. For example, the '373 provisional describes multiple types of RACH preamble resources, including “frequency[sic]/symbols ” as well as “signature[s] for RACH preamble.” '373 provisional, Ex. 5 at 8269, 8273. A person of ordinary skill in the art, reading these disclosures, would understand that the alternative RACH preamble resources described by the '373 provisional for use in the handover would include frequency and time information, as this information would be necessary to transmit the RACH preamble. Cooklev Reb. Rep., Ex. B ¶ 434-39. Thus, a person of ordinary skill would understand that the mobile device would need time and frequency information to transmit the reserved preamble and that the source base station would include that information when sending the mobile device preamble information.

Dr. Kakaes completely ignores the discussion of RACH preamble resources in the initial access procedures, concluding without analysis that “only the ‘2.3 CELL Change for LTE’ section has any possible relevance.” Kakaes Op. Rep., Ex. 3 ¶¶ 97, 102. Indeed, Dr. Kakaes does not even discuss the different type of RACH preamble resources explicitly disclosed by the '373 provisional, nor does he discuss what these disclosures would teach one of ordinary skill. *Id.* Dr. Kakaes’ failure to consider the entire disclosures of the '373 provisional warrant summary judgment in Evolved Wireless’s favor that claims 6 and 19 are supported by the '373 provisional—Dr. Cooklev is the only witness to properly consider the entire disclosures and opine on what they teach to one of ordinary skill.

**(4) “wherein the preamble information is used to identify the terminal”  
(dependent claim 12)**

The limitation of claim 12 is sufficiently disclosed by the ’373 provisional. As discussed above, the ’373 provisional describes reserving a “RACH preamble resource e.g. signature” for use during a handover. *See* ’373 provisional, Ex. 5 at 8273. The ’373 provisional also describes a “new defined interface between eNodeBs” for “context forwarding from serving NodeB to drift NodeB for supporting lossless or seamless handover.” *Id.* at 8277; *see also* Cooklev Reb. Rep., Ex. B ¶ 351. Further, the ’373 provisional discloses using a “preconfiguration” handover procedure with “resource setup in new ENodeB.” ’373 provisional, Ex. 5 at 8280; Cooklev Reb. Rep., Ex. B ¶ 351. These disclosures teach a person of ordinary skill that the communications between the base stations, for example to preconfigure the reserved RACH preamble, would include using the RACH preamble resource to identify the terminal at the target base station. Cooklev Reb. Rep., Ex. B ¶ 351.

Dr. Kakaes again ignores these disclosures, stating without analysis that “only the ‘2.3 CELL Change for LTE’ section has any possible relevance.” Kakaes Op. Rep., Ex. 3 ¶ 99. Indeed, other portions of the provisional not considered by Dr. Kakaes clearly discuss handovers and are relevant to what they teach one of ordinary skill. *See* ’373 provisional, Ex. 5 at 8277 (discussing “lossless or seamless handover”); *id.* at 8280 (discussing a “preconfiguration” handover procedure). Based on Dr. Kakaes’ failure to analyze the entire disclosures in the ’373 provisional, there is no genuine issue of material fact that claim 12 is supported by the ’373 provisional.

**(5) “wherein the access information includes system information  
transmitted from the target base station” (dependent claim 20)**

The limitation of claim 20 is sufficiently disclosed by the ’373 provisional. When discussing the initial access procedure, the ’373 provisional describes that system information is

transmitted from the base station to the mobile device through the “BCH,” which includes “the resource grant per UE.” ’373 provisional, Ex. 5 at 8270.

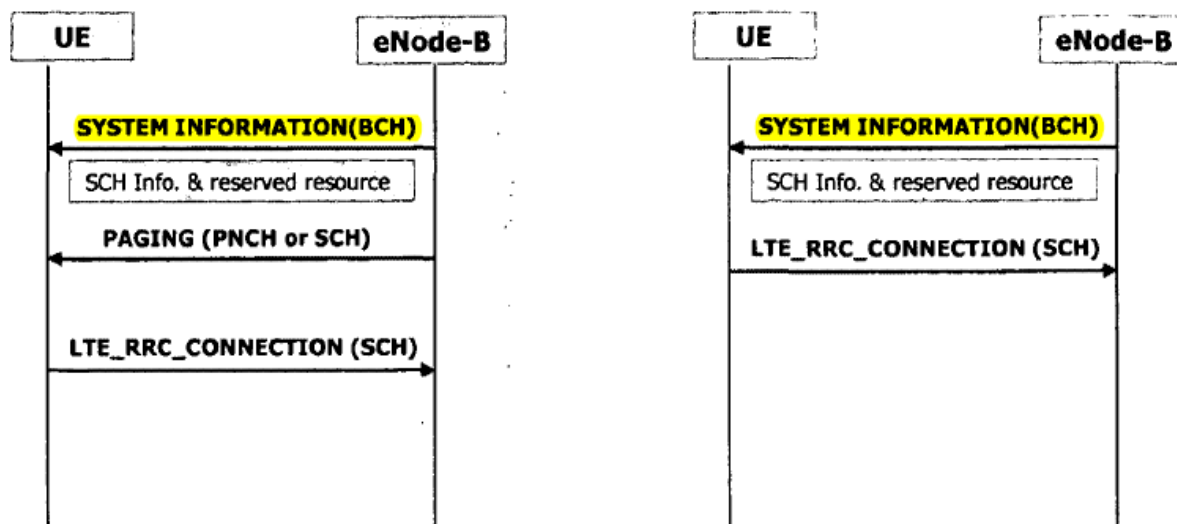


Fig 2. Procedure of initial access through BCH

Based on the same disclosures discussed above for claim 12, a person of ordinary skill in the art would understand that the source and target base station, communicating with each other to preconfigure the handover for the mobile device, would also send system information with the reserved RACH preamble. Cooklev Reb. Rep., Ex. B ¶ 443. And similar to Dr. Kakaes’ analysis of claim 12, Dr. Kakaes failed to analyze these disclosures, concluding without analysis that “only the ‘2.3 CELL Change for LTE’ section has any possible relevance.” Kakaes Op. Rep., Ex. 3 ¶ 103. Without considering all of these handover disclosures in the provisional and what they teach to one of ordinary skill, Dr. Kakaes fails to raise a genuine issue of material fact and summary judgment that claim 20 is sufficiently supported by the ’373 patent is appropriate.

Thus, as discussed above, the ’373 provisional application supports the claims of the ’373 patent and the ’373 patent is entitled to the provisional filing date. Regardless of whether Wang is supported by its provisional application, the ’373 provisional was filed before any of Wang’s

disclosures. As such, HTC's obviousness anticipation arguments based on Wang fail because Wang is not prior art to the '373 patent.

### **iii. Wang is not Entitled to its Provisional Application's Filing Date**

Because Wang's patent application did not publish until December 20, 2007, Wang can only be prior art to the '373 patent under 35 U.S.C. § 102(e). The relevant portion of section 102(e) holds that "[a] person shall be entitled to a patent unless . . . the invention was described in . . . (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent." 35 U.S.C. § 102(e). Under section 102(e), applications for patent include provisional and non-provisional patent applications. *In re Giacomini*, 612 F.3d 1380, 1383 (Fed. Cir. 2010). Thus, Wang is a section 102(e) reference to the '373 patent only if (1) the '373 patent is not entitled to its provisional application filing date (discussed above), *and* (2) the claims of Wang are supported by its provisional application.

If the Court agrees with Evolved Wireless that the '373 patent is entitled to claim priority back to its provisional application, the Court need not decide whether Wang is supported by its provisional because Wang could not be prior art. The earliest possible priority date that may be accorded to Wang is after the '373 provisional filing date. If the Court does consider Wang's provisional, however, no reasonable jury could find that Wang's provisional application supports the claims of the issued Wang patent. Moreover, the Wang non-provisional application included significant material that was not disclosed in the Wang provisional application such that this new material is only entitled to the non-provisional filing date. The non-provisional filing date of Wang is after the filing date of the '373 patent and it is not prior art.

As the party challenging validity of the '373 patent, HTC bears the burden to show that the Wang patent is entitled to the filing date of its provisional. *Dynamic Drinkware*, 800 F.3d at 1379. "A reference patent is only entitled to claim the benefit of the filing date of its provisional

application if the disclosure of the provisional application provides support *for the claims* in the reference patent in compliance with § 112, ¶ 1.” *Id.* at 1382 (citing *In re Wertheim*, 646 F.2d 527, 537 (CCPA 1981)) (emphasis added). HTC cannot meet this burden because the “reserved RACH preamble signature” claimed in Wang—and the disclosures HTC relies on from Wang to invalidate the ’373 patent—were not described in the Wang provisional and were only added when the non-provisional patent application was filed. HTC’s conclusory citations to other disclosures in the Wang provisional fails to raise a genuine issue of material fact and no reasonable jury could conclude that Wang’s claims to a “reserved RACH preamble signature” is entitled to its provisional filing date.

**(1) The Wang Provisional does not Support Claims 9, 10, 27, and 28**

Claims 9, 10, 27, and 28 of the Wang patent claim “[t]he WTRU of claim 1 wherein a particular RACH preamble signature is reserved for the handover” and “[t]he WTRU of claim 1 wherein a reserved RACH preamble signature is indicated in the handover command.” Wang, Ex. 4 at 8:4-7. Dr. Kakaes contends that five disclosures in the Wang provisional support claims 9, 10, 27, and 28 of the Wang patent, including an optional “RACH procedure” using an “access signature with higher orthogonality, higher priority and/or higher power.” *See Kakaes Op. Rep.*, Ex. 3 at App. A. As explained by Dr. Cooklev, the disclosure in the Wang provisional for access signatures with “higher orthogonality, higher priority and/or higher power” teach a person of ordinary skill to use a grouping of access signatures for each purpose, but do not disclose using one particular access signature for a specific mobile device. *Cooklev Reb. Rep.*, Ex. B ¶ 472. This is consistent with the disclosure in the Wang specification, which describes that a “*plurality* of RACH preamble signatures with different orthogonality and different priority may be used, and among the plurality of RACH preamble signatures, a RACH preamble signature with higher orthogonality, higher priority and/or higher power may be used for the handover purpose.”

Wang, Ex. 4 at 4:59-63 (emphasis added).

Indeed, this disclosure is actually claimed by different claims in Wang, claims 8 and 26, which recite: “[t]he WTRU of claim 1 wherein a plurality of RACH preamble signatures with different orthogonality and different priority are used, and among the plurality of RACH preamble signatures, a RACH preamble signature with higher orthogonality, higher priority and higher power is used for the handover.” Ex. 4 at 7:65-8:4. Further, claim 8 was originally included in the Wang provisional as claim 20, but claims 9, 10, 27, and 28 were only added when the Wang patent was filed. *Compare* Wang provisional, Ex. 7 at pp. 8-10, *with* Wang, Ex. 4 at 7:65-8:7. On its face, the Wang provisional does not teach one of skill in the art how to practice the invention claimed in claims 9, 10, 27, and 28.

The other disclosures relied on by Dr. Kakaes also do not teach using a particular RACH preamble signature for a specific mobile device. The Wang provisional discloses that the RACH may be used to indicate a handover, for example with a RACH preamble signature or with a message after the RACH preamble, but this does not suggest that the mobile device will use a particular RACH preamble signature. *See* Wang provisional, Ex. 7 ¶ [0036]. Similar to the grouping of preambles above, the disclosure teaches that a group of preambles could be used for handover to indicate to the base station a handover is taking place—when a mobile device randomly selects a preamble within the group of handover preambles, the mobile station will know the mobile device is attempting a handover. *See* Cooklev Reb. Rep., Ex. B ¶ 472. Further, nothing in the provisional suggests that a particular RACH preamble for a specific terminal will be include within the handover command message—the provisional only discusses including information in the handover command about what access procedure will be used between the RACH procedure and “DL scheduling for the UE” by the target base station. Wang provisional,

Ex. 7 ¶ [0025]; *see also* Cooklev Reb. Rep., Ex. B ¶ 471. All of the missing details from the provisional were only added when the non-provisional application was filed. Cooklev Reb. Rep., Ex. B ¶ 474.

Nor does the Wang provisional inherently teach one of skill in the art how to practice claims 9, 10, 27, and 28 of the Wang patent. “Under the doctrine of inherent disclosure, when a specification describes an invention that has certain undisclosed yet inherent properties, that specification serves as adequate written description to support a subsequent patent application that explicitly recites the invention's inherent properties.” *Yeda Research & Dev. Co. v. Abbott GmbH & Co.*, 837 F.3d 1341, 1345 (Fed. Cir. 2016). Inherency “requires that the missing descriptive material is ‘necessarily present,’ not merely probably or possibly present.” *Trintec Indus., Inc. v. Top-USA Corp.*, 295 F.3d 1292, 1295 (Fed. Cir. 2002). Wang’s disclosures of multiple groupings of preamble signatures with “higher orthogonality, higher priority, and higher power” does not inherently teach that one particular preamble should be used for a specific terminal because there are multiple possible teachings from these disclosures. Cooklev Reb. Rep., Ex. B ¶ 472. Thus, as a matter of law, Wang is not entitled to its provisional filing date because the “reserved RACH preamble signature” claims 9, 10, 27, and 28 were not adequately described until the filing of the non-provisional application. *See* Cooklev Reb. Rep., Ex. B ¶¶ 466-77.

## **(2) The Wang Provisional does not Support Wang’s Specification**

HTC relies on the Wang specification to disclose, among other limitations, the claimed “dedicated preamble” of the ’373 patent. Kakaes Op. Rep., Ex. 3 ¶¶ 326-32. But these portions of Wang were not described in the Wang provisional application and were only added when the non-provisional application was filed. *Compare* Wang provisional, Ex. 7 ¶ [0035], *with* Wang, Ex. 4 at 4:59-5:16. Indeed, the Wang specification in the non-provisional application describes

the use of a “dedicated access signature,” a “particular (dedicated) RACH preamble signature . . . reserved for the handover,” and a “reserved RACH preamble signature.” Wang, Ex. 4 at 3:50, 4:64, & 5:1-2. All of these disclosures are missing from the Wang provisional application and were only added with the filing of the non-provisional application. *See* Cooklev Reb. Rep., Ex. B ¶¶ 377-88. As a matter of law, these disclosures in Wang are not entitled to the priority date of the provisional application.

This is consistent with *In re Wertheim*, a decision from the Court of Customs and Patent Appeals (the predecessor to the Federal Circuit). In *Wertheim*, the court held that a continuation-in-part application could not claim priority to its parent application because the continuation-in-part application added additional new matter that was not disclosed in the original parent application. *In re Wertheim*, 646 F.2d 527, 536 (CCPA 1981) (“[O]nly an application disclosing the patentable invention before the addition of new matter . . . can be relief upon to give a reference disclosure the benefit of its filing date . . .”). The court explained this rule of law with an example of three patent applications, each adding additional subject matter. “Let us assume that Pfluger I disclosed subject matter A. Because two continuation-in-part applications followed, II may be said to contain subject matter AB, B representing new matter, and III may be said to contain ABC, C representing the additional new matter in that application.” *Id.* at 526. When making its obviousness rejection, the patent office “reached back to Pfluger I and retrieved A, found it ‘carried over’ into the patent and combined it with a secondary reference to find the Wertheim invention obvious.” *Id.*

The court held that the subject matter disclosed in the first application, A, was not entitled to the priority date of the first application because the subject matter claimed by the issued patent, ABC, was not disclosed until the filing of the third application. *Id.* at 537.



Significantly, the court found that “[t]he two claim limitations of the reference patent missing from Pfluger I were a necessary part of the only patentable invention ever set forth in the Pfluger file history.” *Id.* at 539. “These limitations, however, were neither expressly nor inherently part of the original Pfluger disclosure. Absent these steps, the Pfluger I filing date cannot be accorded to the Pfluger patent reference.” *Id.*

Thus, similar to *Wertheim*, Wang is not entitled to the benefit of its provisional application’s priority date. Wang’s disclosures of a “particular (dedicated) RACH preamble signature” were not added until the filing date of the non-provisional application—subject matter B or C in the CCPA’s *Wertheim* analysis. Under *Wertheim*, Wang’s disclosure of a “reserved RACH preamble signature”—claimed in claims 9, 10, 27, and 28 in the Wang patent—are not entitled to the Wang provisional filing date because the claims do not have written description support under 35 U.S.C. § 112. “Without such support, the invention, *and its accompanying disclosure*, cannot be regarded as prior art as of that filing date.” *Id.* at 537 (emphasis added).

In conclusion, Wang is not prior art to the ’373 patent. The Wang provisional describes neither the claims nor the disclosures for the “reserved RACH preamble signature”—which were added only when the non-provisional application was filed. As such, Evolved Wireless respectfully moves for partial summary judgment that Wang is not prior art to the ’373 patent. And because Wang is not prior art, HTC’s obviousness and anticipation arguments based on Wang fail.

#### **D. Wang does not Anticipate Any Asserted Claim**

HTC and its expert Dr. Kakaes contends that Wang anticipates the asserted claims of the ’373 patent. *See* Kakaes Op. Rep., Ex. 3 ¶¶ 283-457. But Wang does not explicitly or inherently disclose the claim limitation “wherein the dedicated preamble is determined by the target base station,” as required by each of the independent claims, and thus Wang cannot

anticipate the asserted claims.

A patent is invalid as anticipated if “the invention was . . . patented or described in a printed publication in this or a foreign country, before the invention” date. 35 U.S.C. § 102(a). To establish anticipation, Apple “must show ‘that the four corners of a single, prior art document describe every element of the claimed invention,’” with the elements “arranged or combined in the same way as in the claim.” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1370 (Fed. Cir. 2008). Anticipation by inherency can only be established when the “prior art necessarily functions in accordance with, or includes, the claimed limitations.” *Bettcher Indus., Inc. v. Bunzl USA, Inc.*, 661 F.3d 629, 640 (Fed. Cir. 2011). “Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Id.*

Wang does not explicitly disclose that the claimed “dedicated preamble” is “determined by the target base station,” as required by each independent claim of the ’373 patent. *See* Cooklev Reb. Rep., Ex. B ¶¶ 485-91. HTC alleges that Wang inherently discloses this limitation because “POSITAs would have recognized that it would not be practical for a source eNode-B to dictate to a target eNode-B what access information a WTRU must use to connect to a target eNode-B in a handover procedure.” *See* Kakaes Op. Rep., Ex. 3 ¶ 316; *see also* Cooklev Reb. Rep., Ex. B ¶¶ 485-91. Yet contrary to Dr. Kakaes’ opinion that it would not be practical for any other entity to determine the dedicated preamble, a 3GPP proposal submitted by Motorola during development of the LTE standard proposes that the source base station, and not the target base station, should determine the dedicated preamble. *See* Ex. 8, EVOLVED-0483862 at 3866; Cooklev Reb. Rep., Ex. B ¶ 488-89. Because Wang does not explicitly disclose that the target base station determines the dedicated preamble, and the source base station could have

determined the dedicated preamble instead of the target base station, Wang cannot anticipate any of the asserted claims.

**E. HTC Has Failed to Offer a Legally Sufficient Motivation to Combine**

HTC's obviousness combinations do not invalidate the '373 patent because HTC has not shown a motivation to combine any of the references. "[T]here must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). But here, HTC offers only conclusions and fails to establish obviousness by clear and convincing evidence. Dr. Kakaes, HTC's only witness offered to discuss invalidity, asserts that the '373 patent is obvious over Hu; Wang; Hu and Wang; and Hu and NEC. Yet Dr. Kakaes' motivation to combine these references is nonexistent—he only alleges that a person *could* combine the references. *See* Kakaes Op. Rep., Ex. 3 ¶¶ 454-57 ("POSITAs could have incorporated concepts from Hu's disclosed handover procedure into Wang's handover procedure in the LTE environment."); ¶¶ 469-72 ("POSITAs could have incorporated concepts from Hu's disclosed handover procedure into NEC 106's handover procedure in the LTE environment."). Because Dr. Kakaes' analysis is not specific to why any particular combination of references would be combined, HTC's obviousness arguments fail as a matter of law. *See ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012).

"A party seeking to invalidate a patent on obviousness grounds must 'demonstrate by clear and convincing evidence that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.'" *InTouch Techs., Inc. v. VGo Commc'ns, Inc.*, 751 F.3d 1327, 1347 (Fed. Cir. 2014) (citation and quotations omitted). In many cases, "a clear, evidence-supported account of the contemplated workings of the combination is a

prerequisite to adequately explaining and supporting a conclusion that a relevant skilled artisan would have been motivated to make the combination and reasonably expect success in doing so.” *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 994 (Fed. Cir. 2017). “[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does . . . because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

The Federal Circuit has consistently held that an expert’s opinion that the prior art references *could* be combined is insufficient to establish obviousness—the necessary inquiry is whether a person of ordinary skill *would* be motivated to combine the references. *See Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (“[O]bviousness concerns whether a skilled artisan not only could have made but would have been motivated to make the combinations or modifications of prior art to arrive at the claimed invention.”). For example, in *InTouch Technologies*, the Federal Circuit concluded that the expert “failed to provide any meaningful explanation for why one of ordinary skill in the art *would* be motivated to combine these references” where the expert only “opined that one in the field of robotics *could* combine these references.” *InTouch Techs., Inc. v. VGo Commc’ns, Inc.*, 751 F.3d 1327, 1353-54 (Fed. Cir. 2014) (emphasis added).

Similarly, in *Innogenetics*, the Federal Circuit noted that the expert “merely lists a number of prior art references and then concludes with the stock phrase ‘to one skilled in the art it would have been obvious to perform the [claimed] genotyping method.’” *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1373 (Fed. Cir. 2008). This was insufficient to establish

obviousness because “[n]owhere does Dr. Patterson state how or why a person ordinarily skilled in the art would have found the claims of the ’704 patent obvious in light of some combination of those particular references.” *Id.*

Particularly applicable here is the Federal Circuit’s decision in *ActiveVideo Networks v. Verizon Communications*. In that case, the Federal Circuit found that conclusory expert testimony on the motivation to combine could not establish obviousness as a matter of law. The expert testified that:

The motivation to combine would be because you wanted to build something better. You wanted a system that was more efficient, cheaper, or you wanted a system that had more features, makes it more attractive to your customers, because by combining these two things you could do something new that hadn’t been able to do before.

*ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012).

The Federal Circuit noted that this “testimony is generic and bears no relation to any specific combination of prior art elements.” *Id.* Further, the testimony failed “to explain why a person of ordinary skill in the art would have combined elements from specific references *in the way the claimed invention does*.” *Id.* (emphasis in original). The expert also “failed to explain how specific references could be combined, which combination(s) of elements in specific references would yield a predictable result, or how any specific combination would operate or read on the asserted claims.” *Id.* at 1327. Dr. Kakaes’ allegations regarding obviousness suffer from these same problems and cannot establish invalidity of the ’373 patent by clear and convincing evidence. *See also IGT v. Bally Gaming Int’l Inc.*, 610 F. Supp. 2d 288, 329 (D. Del. 2009) (granting summary judgment where “there is no rationale provided by Mr. Crevelt for why a person of ordinary skill in the art would make the asserted combination of five references, or would have reasonably expected success”).

First, Dr. Kakaes does not offer substantive analysis on why the references would be

combined in the way claimed by the '373 patent, instead only arguing that the references could be combined. For example, for the combination of Hu and Wang, Dr. Kakaes alleges that “POSITAs *could* have incorporated Hu’s teachings into Wang’s teachings” and that “POSITAs *could* have incorporated concepts from Hu’s disclosed handover procedure into Wang’s handover procedure in the LTE environment.” Kakaes Op. Rep., Ex. 3 ¶ 456 (emphasis added). Dr. Kakaes then concludes that a person of ordinary skill, “[c]onsidering Wang and Hu together, . . . would have understood” how to make the combination. *Id.* ¶ 457. Yet this testimony does not explain *why* a person would look to combine these two references together. Tellingly, Dr. Kakaes provides no independent or reasoned analysis and instead provides a “one size fits all” conclusion. These opinions are nothing more than “a conclusory statement that a person of ordinary skill in the art would have known . . . how to combine *any of a number of references* to achieve the claimed inventions” and are insufficient to establish obviousness. *ActiveVideo*, 694 F.3d at 1327 (emphasis added).

Dr. Kakaes’ opinions on the combination of Hu and NEC suffer from the same problems. First, Dr. Kakaes makes the same conclusory allegations that “POSITAs *could* have incorporated Hu’s teachings into NEC 106’s teachings” and that “POSITAs *could* have incorporated concepts from Hu’s disclosed handover procedure into NEC 106’s handover procedure in the LTE environment.” Kakaes Op. Rep., Ex. 3 ¶¶ 471-72 (emphasis added). “But that reasoning seems to say no more than that a skilled artisan, once presented with the two references, would have understood that they could be combined. And that is not enough: it does not imply a motivation to pick out those two references and combine them to arrive at the claimed invention.” *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 993-94 (Fed. Cir. 2017). In the section titled “Reasons to Combine Hu and NEC 106,” Dr. Kakaes offers only four short paragraphs and does

not explain *why* a person of ordinary skill would combine these two particular references together. Dr. Kakaes' obviousness arguments fail because it is not specific to why any particular references would be combined.

Worse, Dr. Kakaes failed to explain how Hu and NEC could be combined together, "which combination(s) of elements in specific references would yield a predictable result, or how any specific combination would operate or read on the asserted claims." *ActiveVideo*, 694 F.3d at 1327. Similar to *Innogenetics*, Dr. Kakaes "merely lists a number of prior art references" and "[n]owhere does [Dr. Kakaes] state how or why a person ordinarily skilled in the art would have found the claims of the ['373 patent] obvious in light of some combination of those particular references." *Innogenetics*, 512 F.3d at 1373; Kakaes Op. Rep., Ex. 3 ¶¶ 458-72. Indeed, other than listing quotes from the prior art disclosures to allegedly show each claim limitation was known, Dr. Kakaes does not offer any opinion regarding *how* the references would be combined together or *why* these specific references would be combined to arrive at the claims of the '373 patent. *See KSR*, 550 U.S. at 418 ("A patent composed of several elements is not proved obvious by merely demonstrating that each of its elements was, independently, known in the prior art.").

Further, Dr. Kakaes does not offer any reasonable expectation of success for any of his obviousness combinations. "A party seeking to invalidate a patent on obviousness grounds must 'demonstrate by clear and convincing evidence that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, *and that the skilled artisan would have had a reasonable expectation of success in doing so.*'" *InTouch Techs.*, 751 F.3d at 1347 (citation and quotations omitted) (emphasis added). Here, the skilled artisan has a master's degree in electrical engineering and perhaps 2-3 years of experience, see *supra* § V.B, but Dr. Kakaes has not offered any explanations that there would be any

expectation of success for combining any of these references together. *See, e.g.*, Kakaes Dep. Tr., Ex. 9 at 136:19-138:4; Kakaes Op. Rep., Ex. 3 ¶¶ 469-72. Because HTC has failed to establish the necessary components of its obviousness challenge, summary judgment should be granted. *See Bally Gaming*, 610 F. Supp. 2d at 329 (“On this record and in view of defendants heightened burden to show obviousness by clear and convincing evidence, the court finds that no reasonable jury could find in favor of defendants.”).

Dr. Kakaes also offers conclusory assertions that Hu and Wang, by themselves, render the asserted claims obvious when combined with the knowledge of a person of ordinary skill. *See* Kakaes Op. Rep., Ex. 3 ¶¶ 109-453. These opinions also fail because Dr. Kakaes fails to offer any particular analysis why a POSITA would modify the reference, based only on their knowledge, to arrive at the claimed invention. Single reference prior art combinations are “less common,” and HTC must still show that “it would have been obvious to modify that reference to arrive at the patented invention.” *Arendi Sarl v. Apple Inc.*, 832 F.3d 1355, 1361 (Fed. Cir. 2016). Because Dr. Kakaes has not opined *why* he would modify either Hu or Wang individually to arrive at the invention of the ’373 patent without relying on the ’373 patent as a roadmap, these obviousness arguments fail. *See id.* (“[T]he court must avoid ‘hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.’”).

In summary, HTC’s obviousness arguments fail as a matter of law. As to any combination, HTC has failed to offer any legally sufficient motivation to combine to show—with reasoned and articulated analysis—that a person of ordinary skill in the art would have been motivated to combine the prior art to arrive at the claims of the ’373 patent with a reasonable expectation of success. As such, Evolved Wireless seeks summary judgment that HTC has not shown any asserted claim of the ’373 patent is obvious by clear and convincing evidence.



## **VI. Conclusion**

HTC has failed to raise any genuine issue of material fact regarding several of its invalidity arguments. For example, HTC cannot show that Wang is prior art to the '373 patent. Further, HTC has failed to offer any legally sufficient motivation to combine the prior art in its obviousness arguments based on Hu, Wang, Hu and Wang, and Hu and NEC. For the reasons argued above, Evolved Wireless respectfully moves for partial summary judgment that the '373 patent is valid over HTC's anticipation and obviousness arguments.

Dated: October 6, 2017

Respectfully submitted,

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